

Appl. No. 10/605,120
Amtd. dated June 12, 2006
Reply to Office action of April 06, 2006

REMARKS/ARGUMENTS

1. Specification Objections

The specification was objected to, as paragraph [0007] contained the informality "Yang et al, in United States Patent No. 0,039,189". The specification has been amended accordingly.

2. Claim Objections

Claims 1 – 14 were objected to as Claims 1 7- referred to method steps (a) – (d) and Claims 6 –14 referred to method steps (f) – (h), but no step (e) was claimed. The claims have been amended accordingly.

10 3. Claim Rejections - 35 U.S.C. 103(a)

Claims 1 – 4, 6, and 10 – 13 were rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe et al, in view of Yanagawa et al. Claim 1 has been amended to include the limitations "combining the result measured in step (c) with the first time to determine a first judging value, and combining the result measured in step (b) with the first time to determine a second judging value", and "identifying the type of the optical disc according to the first judging value and the second judging value." These limitations are fully supported in specification paragraph [0028]. No new matter is introduced. Consideration of amended claim 1 is respectfully requested.

20 Specification paragraph [0028] discloses a method step wherein the first time is combined with the result from step (c) to determine a first judging value, the first time is combined with the result from step (b) to determine a second judging value, and the first judging value and the second judging value are compared with each other to determine whether an optical disc is a CD or a DVD. The applicant asserts that this added limitation

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would not be achieved by combining Watanabe and Yanagawa. Watanabe discloses a system for identifying the type of an optical disc by using the characteristic of an FE signal. Yanagawa uses a time for a light source to move from a plastic layer to a reflection layer of an optical disc to determine the type of the optical disc. As both operations give 5 the same result (i.e. determine whether an optical disc is a CD or a DVD) it would not be obvious to combine the operations to determine a new value for achieving the same result. Therefore, there is no motivation to combine results obtained in both determination procedures to determine a first judging value and a second judging value, nor is such a combination suggested or implied in either Watanabe or Yanagawa.

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Furthermore, both Watanabe and Yanagawa disclose systems where results obtained in operations are compared with **predetermined thresholds** for identifying the type of an optical disc: "if the observed time interval is greater than a predetermined time threshold value, the disk is determined to be a CD type disk. On the other hand, if the observed time 15 interval is smaller than the predetermined time threshold value, the disk is determined to be DVD type disk." [US 6,975,574, Col.11, lines 31 – 35]. "If CD or CD-R has been loaded in the apparatus at this time, the amplitude of an S-shaped signal generated on FE becomes larger than a predetermined comparison value.." [US 6,493,304, Col.15, lines 28 – 30]. Claim 1 has the limitation "identifying the type of the optical disc according to 20 the first judging value and the second judging value". It is obvious that said first judging value and second judging value are **not predetermined values**, and are **determined at the point of operation**. The final determination as to whether a disc is a CD or a DVD is obtained by **comparing** measured results with each other, and not with a predetermined value as in the prior arts. Therefore, applicant asserts that the added limitation overcomes 25 the obviousness rejection by the examiner.

Applicant therefore asserts that currently amended Claim 1 has been placed in a position for allowance. Claims 4 ~ 5 are amended to concur with currently amended

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Claim 1. As claims 2 – 14 are dependent on Claim 1, they should be found allowable if Claim 1 is found allowable.

4. Patentability of new claims

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Claims 15 and 16 are newly entered. As illustrated in equation (1), at least the first difference FE_DVD_PP corresponding to a first light source and the second difference FE_CD_PP corresponding to a second light source are simultaneously referenced to identify the disc type as a DVD type disc or a CD type disc. Additionally, as stated in specification paragraph [0028], only comparing FE_DVD_PP with FE_CD_PP sometimes is not enough for correctly identifying the disc type, and the first time T1 is also used. Therefore, claims 15 and 16 are fully supported by specification paragraph [0028], and no new matter is introduced. Consideration of claims 15 and 16 is respectfully requested.

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Watanabe discloses using the laser beam with the longest wavelength (780nm) to detect if a CD or CD-R has been loaded, and if the disc is not CD or CD-R, using the laser beam with the wavelength of 650nm to check if the loaded disc is a high-density disc (col. 15, lines 24-59 and Fig.5). Therefore, it is clear that Watanabe fails to teach or 20 suggest the claimed feature “simultaneously referencing at least results measured in steps (a) and (b) to identify the type of the optical disc.”

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Yanagawa discloses using the observed time interval corresponding to a distance between a disc surface and a pit producing surface to identify if the disc is a DVD type disc or a CD type disc. It should be noted that the above time interval is not the characteristics measured during moving the focus of the light source in the reflection layer (i.e., the pit producing surface). After the disc is preliminarily identified as a DVD type disc or a CD type disc using the observed time interval, Yanagawa teaches using a

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laser beam of a fixed wavelength to further identify the disc type:

“In the operation of Step S3, a laser beam having a wavelength of 650nm is emitted (col. 11, lines 41-42)”, “In the disk discriminating operation of Step S4, a laser beam having a wavelength of 650nm is emitted (col. 12, lines 2-4)”;

5 “If, on the other hand, it is determined in Step S4 that the disk 12 is a DVD-R, it is then determined if the DVD-R is a general purpose DVD-R or an authoring purpose DVD-R (Step S5). More specifically, the information of the LPPs is read out to see if the DVD-R is a general purpose DVD-R or an authoring DVD-R after the determination of the category of the disk in Step S4 (col. 12, lines 26-32)”;

10 “In Step S7, a laser beam having a wavelength of 650nm is emitted (col. 12, lines 54-55)”; and

15 “If it is determined in Step S7 that the disk 12 is either a DVD-RW or a DVD-RAM, then it is determined if the disk 12 is in fact a DVD-RW or a DVD-RAM (Step S8). The operation of driving the disk player in Step S6 is continued to Step S8. Thus, it is determined if the push-pull signal such as a tracking error signal TE contains an LPP signal component corresponding to an LPP or not. If an LPP signal component is detected in the push-pull signal, the disk 12 is determined to be a DVD-RW. If, on the other hand, no LPP signal component is detected, the disk 12 is determined to be a DVD-RAM (col. 13, lines 7-17).”

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Therefore, Yanagawa fails to teach or suggest the claimed feature “simultaneously referencing at least results measured in steps (a) and (b) to identify the type of the optical disc.”

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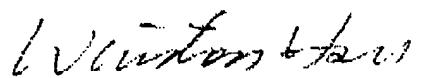
It is therefore not obvious to one of ordinary skill in the art to combine the prior arts of Watanabe and Yanagawa for obtaining all limitations in claim 15. Applicant believes that claim 15 is placed in condition for allowance.

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Regarding claim 16, in view of above arguments, applicant asserts that there is no motivation to combine teachings of Watanabe and Yanagawa to use the time information related to the distance between the plastic layer and the reflection layer to improve the disc type identification accuracy. Additionally, claim 16 is dependent upon claim 15, and
5 should be allowable if claim 15 is found allowable.

Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

10 Sincerely yours,



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